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Patent claims

5   1.   A method for the air conditioning of a vehicle interior as a function of incident solar radiation, with the steps:
detection of the incident solar radiation in different solid angle ranges (FR, FL, RR, RL) by
10   means of a plurality of sensor elements (1a to 1d),
determination of an air conditioning capacity of at least two air conditioning ducts of individually controllable air conditioning
15   capacity for the air conditioning of different vehicle interior regions, the air conditioning capacity of an air conditioning duct being determined, in addition to taking into account an actual interior temperature (T_{Iact}), a desired
20   interior temperature (T_{Ides}), an outside temperature (T_A) and, optionally, a vehicle speed (v), as a function of an output signal (A1 to A4) from a sensor element (1a to 1d) assigned to this air conditioning duct or of an averaged output signal
25   from a sensor element (1a to 1d) assigned to this air conditioning duct,
characterized by the further steps:
calculation of a sunlight steepness (S) according to the following formula
30       $S = ((|A2 - A3| + |A1 - A4|) / 2 * M / \bar{A}$,
S being the sunlight steepness, A2 the output signal from a second sensor element 1b (FL), A3 the output signal from a third sensor element 1c (RR), A1 the output signal from a first sensor
35   element 1a (FR), A4 the output signal from a fourth sensor element 1d (RL), M a multiplier and $\bar{A}$ the arithmetic average value of the output

signals A1 to A4 from the first to fourth sensor elements,

determination of a correction factor (K) with the aid of the calculated sunlight steepness (S),

determination of a corrected air conditioning capacity by the multiplication of the determined air conditioning capacity by the correction factor (K),

setting of the corrected air conditioning capacity.

2. A method for the air conditioning of a vehicle interior as a function of incidence of solar radiation as claimed in claim 1, characterized in that the correction factor (K) is determined as a function of the calculated sunlight steepness (S) in a vehicle-dependent manner during measurements.

3. A method for the air conditioning of a vehicle interior as a function of incident solar radiation as claimed in claim 1 or 2, characterized in that the correction factor (K) is constant below a first threshold value of the sunlight steepness (S1) and above a second threshold value of the sunlight steepness (S2), the constant above the second threshold value being higher than the constant below the first threshold value, and the correction factor (K) having a linear profile between the two threshold values (S1, S2).

4. The method for the air conditioning of a vehicle interior as a function of incident solar radiation as claimed in one of claims 1 to 3, characterized in that, during the determination of the air conditioning capacity on the basis of the incident solar radiation, the blow-in temperature ($T_{Blow-in}$) is lowered and/or the blower power is raised, and

this raising/lowering is maintained or reduced by means of the correction factor.

5. The method for the air conditioning of a vehicle interior as a function of incident solar radiation as claimed in one of claims 1 to 4, characterized in that the selected multiplier (M) is 50.